



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,389	11/14/2001	Makoto Itonaga	24828	7016
20529	7590	08/19/2005	EXAMINER	
NATH & ASSOCIATES 1030 15th STREET, NW 6TH FLOOR WASHINGTON, DC 20005			AGUSTIN, PETER VINCENT	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,389

Applicant(s)

ITONAGA ET AL.

Examiner

Peter Vincent Agustin

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-8 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-8 are now pending, with claims 1-7 remain withdrawn due to a previously set forth restriction requirement.

Specification

2. The amendment filed July 18, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in claim 8, the recitation "converging a blue laser light having a wavelength less than 650 nm" in combination with the other claimed features. Note that this added feature is not disclosed in any embodiment of the Applicant's disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

Art Unit: 2652

inventors, at the time the application was filed, had possession of the claimed invention. See objection to new matter noted above.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (US 6,411,442) in view of the Applicant's admitted prior art.

In regard to claim 8, Ota et al. disclose an objective lens (column 7, line 42) for an optical disk including a transmission layer having a thickness of 0.3 mm or less (note "blue semiconductor laser" in column 1, line 25 and column 14, line 50; and "a novel high density information recording medium that has been enhanced in terms of recording density" in column 16, lines 43-45, which recitations suggest a transmission layer having a thickness of 0.3 mm or less, as known in the art), comprising: a single lens (column 7, line 47: "one piece") having a first surface on a light source side and a second surface on an optical disk side and at least one of the first and second surfaces formed in an aspheric shape (see column 7, lines 42-46), having a numerical aperture of 0.78 or more (column 7, line 57; see also column 2, lines 6-11), converging a blue laser light (note "blue semiconductor laser" in column 1, line 25 and column 14, line 50) having a wavelength less than 650 nm (column 1, lines 20-21; column 2, line 11; column 14, line 36), which is emitted by a light source and enters the first surface, at a focal point outside the lens, and satisfying the following condition:

Art Unit: 2652

$d_1/f > 1.2$ (see inequality in column 2, line 21);

$0.65 < R1/f < 0.95$ (see inequalities in column 2, lines 37 & 47);

$|R1/R2| < 0.7$ (note column 7, lines 42-46, which state that "it is allowable that one side only is made to be an aspherical surface", i.e., the second surface is flat or almost flat, therefore having a curvature radius $R2$ close to infinity, i.e., the expression $R1/R2$ approaches zero); and

$n > 1.65$ (see inequalities in column 2, lines 37 & 43),

in which f denotes a focal distance of the lens (column 2, lines 23-24), d_1 denotes a center thickness of the lens (column 2, lines 23-24), $R1$ denotes a curvature radius in a vertex of the first surface, $R2$ denotes a curvature radius in a vertex of the second surface, and n denotes a refractive index of the lens (column 2, line 39).

Furthermore, in regard to claim 8, while Ota et al. disclose that the objective lens has a working distance of 0.1 mm or more (column 18, line 62), Ota et al. do not explicitly disclose that the objective lens has a working distance of 0.3 mm or more, as claimed.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have selected a working distance of 0.3 mm or more because the claimed range of 0.3 mm or more overlaps with the range of 0.1 mm or more taught by Ota et al. (see MPEP 2144.05, Obviousness of Ranges; *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976)).

Furthermore, in regard to claim 8, while Ota et al. disclose that the objective lens has a wavefront aberration of 0.04λ or less (see column 18, Table 1, Examples 1-15, which all teach a wavefront aberration of 0.04λ), Ota et al. do not explicitly disclose that the objective lens has a

Art Unit: 2652

wavefront aberration of 0.04λ or less when the first surface and the second surface are not co-axial by $5 \mu\text{m}$.

The Applicant's admitted prior art discloses an objective lens having a wavefront aberration of 0.04λ or less when a first surface and a second surface of a lens are not co-axial by $5 \mu\text{m}$ (see last paragraph of page 4 of the original specification). It would have been obvious to one of ordinary skill in the art at the time of the invention by the Applicant to have provided the objective lens of Ota et al. with a wavefront aberration of 0.04λ or less when the first surface and the second surface are not co-axial by $5 \mu\text{m}$ as suggested by the Applicant's admitted prior art, the motivation being to compensate for axis deviation, thereby preventing reproduction/recording errors.

Response to Arguments

8. Applicant's arguments filed July 18, 2005 have been fully considered but they are not persuasive.

On page 6, last paragraph, the Applicant refers to TABLE 2 of Ota et al. in which R_1 is 1.72078 and R_2 is -1.92753 , and argues that the claimed $|R_1/R_2| < 0.7$ is not satisfied by the Ota et al. reference. The Examiner disagrees. The values in TABLE 2 are used merely as examples. The Applicant is directed to column 7, lines 42-46 of Ota et al., which state that "it is preferable that both sides of the objective lens represent an aspherical surface, although it is allowable that one side only is made to be an aspherical surface", i.e., the second surface can be flat or almost flat, therefore having a curvature radius R_2 close to infinity, i.e., the expression R_1/R_2 approaches zero, and therefore satisfies the claimed $|R_1/R_2| < 0.7$.

Art Unit: 2652

9. Applicant's arguments on page 7, paragraphs 2-5 regarding the Kasami et al., Tanaka et al., and the Applicant's admitted prior art have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment to claim 8.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action, i.e, the amendment to claim 8 necessitated further consideration of different sections/embodiments of the Ota et al. reference. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

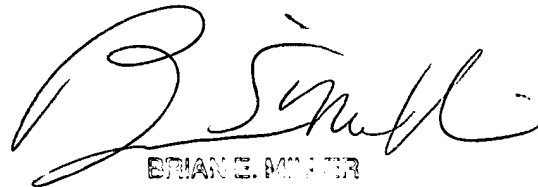
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

Art Unit: 2652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Peter Vincent Agustin
Art Unit 2652



BRIAN E. MILLER
PRIMARY EXAMINER